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MOLECULAR IDENTIFICATION OF FASCIOLA SPECIES ISOLATED FROM CATTLE AND SHEEP IN SOUTHEASTERN IRAN

Elham Akhlaghi[1] , Mohammad Ali Mohammadi[2] ,Saeid Nasibi[3] , Hosein kamyabi[3] , Mehdi Bamorovat[4] , Naser Zia Ali[5], Majid Fasihi Harandi[6]

* 1- MSc., Department of Medical Parasitology, School of Medicine, Kerman University of Medical Sciences, Kerman, Iran ea.kerman@yahoo.com
2- Instructor, Department of Medical Parasitology, School of Medicine, Kerman University of Medical Sciences, Kerman, Iran
3- MSc., Department of Medical Parasitology, School of Medicine, Kerman University of Medical Sciences, Kerman, Iran
4- Ph.D Student, Department of Medical Parasitology, School of Medicine, Kerman University of Medical Sciences, Kerman, Iran.
5- Associate Professor, Department of Medical Parasitology, School of Medicine, Kerman University of Medical Sciences, Kerman, Iran
6- Professor, Department of Medical Parasitology, School of Medicine, Kerman University of Medical Sciences, Kerman, Iran

Fascioliasis is an important zoonotic helminth infection in animals and human and is caused by *Fasciola hepatica* and *Fasciola gigantica*. Little is known on the etiological agent of fascioliasis in Kerman province. The purpose of the present study was to identify *Fasciola* species involving in *Fasciola* infection in different regions of Kerman province in southeastern Iran, using molecular tools. Materials & Methods. Flukes were collected from the livers of 38 naturally infected animal (8 cattle and 30 sheep) in Kerman province. Fresh flukes washed in normal saline and then genomic DNA was extracted from a small portion of the lateral margin of posterior end of each isolate and PCR-Sequencing were performed utilizing mitochondrial cytochrome c oxidase subunit 1 (cox1) gene marker. The sequences were then analysed by NCBI blast and the software Sequence Scanner. Based on the results of cox1 sequence analysis both *F. hepatica* and *F. gigantica* were identified. Out of 38 isolates, 5 flukes (13.1%) were identified as *F. gigantica* and 33 (86.9%) as *F. hepatica*. All isolate samples from 30 sheep belongs to *Fasciola hepatica* and 5 cattle out of 8 were infected with *Fasciola gigantica* and 3 of them with *Fasciola hepatica*. Conclusions: The results of the present study provided background information for more efficient diagnosis and control of the diseases in the region.

Keywords: *Fasciola gigantica*, *Fasciola hepatica*, molecular identification, cox1, southeastern Iran

SEROLOGICAL STUDY ON FASCIOLIASIS IN PATIENTS REFERRING TO THE SCHOOL OF PUBLIC HEALTH, TEHRAN UNIVERSITY OF MEDICAL SCIENCES, DURING 2008-20014

Mojgan Aryaeipour[1], Eshrat Beigom Kia[2], Zahra Heidari[3], Mohammad Bagher Rokni[2]

* 1- MSc.,Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran. maryaiepour@gmail.com
2- Professor, Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran.
3- Ph.D Student, Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran.

Fascioliasis is a zoonotic disease of livestock and human caused by *Fasciola* species. Here in, the result of serological evaluation of fascioliasis in people referring to the School of Public Health, Tehran University of Medical Sciences during 2008-2001 is presented. Demographic data, symptoms and eosinophil rate were registered for every patient. Using somatic antigen of *Fasciola*, ELISA was performed and the results were analyzed. Data were analyzed as well. Among 206 applicants, 24.7% were seropositive for fascioliasis, included 45% female and 55% male. Mean age of patients was between 13 to 67 yr. The highest rate of seropositivity was found among 20-30 yr old which coctituted about 39% of all patients. Most of the patients had hypereosinophilia. All patients had history of eating raw vegetables, or drinking unsafe water. Patients were referring from different provinces of Iran. These provinces in descending order included Guilan, Mazandaran, Ardabil, Khuzestan, Lorestan, North Khorasan, Kermanshah, Azerbaijan, Fars, Kordestan, Hamedan and Markazy.During recent years, fascioliasis has been increased in many provinces in Iran. Patients coming from Guilan and Mazandaran provinces were referred early after the onset of their symptoms. Most probably, physicians in this regeions are more alert on fascioliasis than other provinces. Previous wrong diagnosis was more common among patients referring from other provinces than latter provinces.

Keywords: fascioliasis, ELISA, raw vegetable, Iran